

## BETTER INTERNAL SYSTEMS REDUCE REJECTION RATES

**ABOUT SPECTRAL SYSTEMS.** Spectral Systems is a leader in precise optical components, coatings and systems integration. Located in Hopewell Junction, New York, with close to 50 employees, Spectral prides itself on its ability to make optics to specification for each and every customer. The company houses state-of-the-art polishing, coating, and inspection equipment, and provides the most comprehensive capabilities in optical solutions for the entire infrared range, from the vacuum UV to the Far-IR.

**THE CHALLENGE.** Spectral Systems needed to reduce its product rejection rates and improve its internal systems, specifically when it came to the production of its lenses. Bruce Capuano, Vice President of Spectral Systems, was looking to standardize the company's operating procedure and equipment, as well as its methods and processing. By improving these aspects of the company, Capuano expected better product flow as the first pass quality of Spectral's lenses improved.

**MEP CENTER'S ROLE.** Spectral Systems worked with the Manufacturing & Technology Enterprise Center (MTEC), a NIST MEP affiliate, to reduce lens fogging and the corresponding rejection rates caused by this fogging. MTEC Senior Project Engineer, Phil vanOss, integrated himself into the Spectral team to communicate the value of Lean Six Sigma. The training sessions included Process Flow Analysis as well as Data Display and Root Cause Analysis. Spectral updated its detailed standardized operating procedures and successfully reduced its rejection rate from 300 per week down to 50 per week. The company expects a continued downward trend to bring the number of rejects down even further, to about 20 per week. With the lower rejection rate, Spectral is performing more efficiently and enhancing the overall quality of the product. The company is processing jobs 10 times faster than before, which helps coating to stay on target. Eight months after engaging MTEC, Spectral had one week where it achieved its goal of zero reworks.

Spectral also worked with MTEC to implement Lean 5S Visual Systems Training, a system for detailing and improving the flow of materials within the company. Through the 5S process of Sort, Set in Order, Shine, Standardize, and Sustain, the Spectral team removed excess materials and organized the storage room, thereby increasing the productivity and cleanliness of the facility. "Altogether, the partnership focused on teaching a problem solving approach, which will extend greatly beyond the project itself," commented vanOss. "This way of thinking is an invaluable asset for Spectral as they continue to grow and optimize their internal functions."

**"We are very pleased with the outcome of this project and plan on using MTEC for future training and manufacturing improvement projects."**

-Bruce Capuano, Vice President

## RESULTS



Reduced rejection rate by 83%, from 300/wk to 50/wk



Processed jobs **10** times faster

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